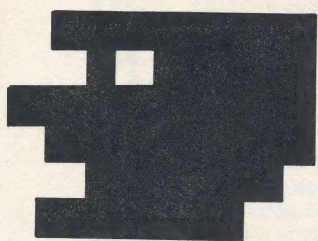


SoftSideTM Selections

nine



games

RELAAAX...



#43

FALL



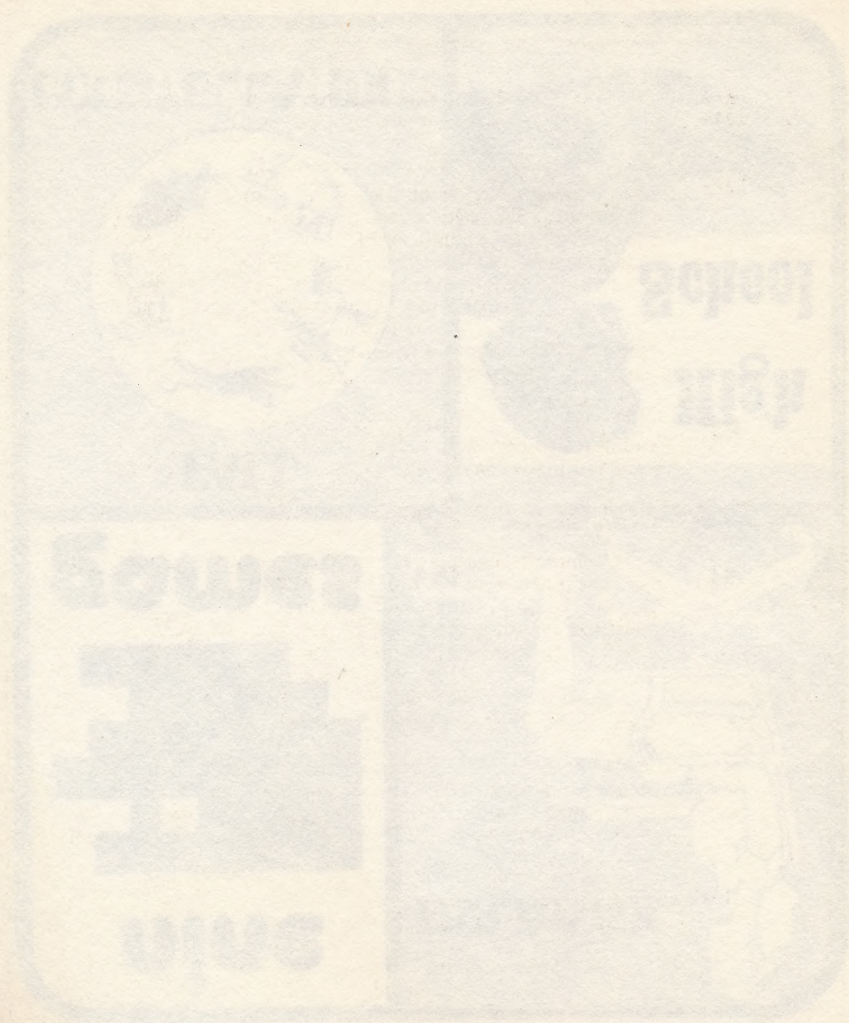
CONSTELLATIONS

**High
School**



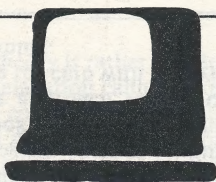
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by Peter J. Favaro

TRS-80® translation by Rich Bouchard.



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RELAAAX ...



by Peter J. Favaro
with Richard M. O'Brien, Ph.D.

TRS-80 translation by Rich Bouchard

Relaaax... is a recreational program for the TRS-80 Model I or III with 16K RAM.

Please read the instructions before booting up the program. Removing distractions and sources of tension, such as glare on the screen, is essential to successful results. Turn down the brightness on your monitor to reduce eyestrain.

If you spend hours and hours in front of your television set or monitor playing games, hacking away or telecommunicating (so who doesn't?), you probably leave those sessions with assorted aches and pains. They may be as mild as a slight headache or as serious as a stiff neck which lasts for days. Stress, color saturation, unnatural sitting positions, and fatigue are the likely culprits responsible for these annoyances, usually related to a straining of one or more muscle groups. A hot bath or a nice massage often is a good solution to these problems, but when they are impractical or unavailable, you can use your computer (and *Relaaax...*) to help you relieve the tension it has helped to create. With this series of programs, you can learn to relax after any stressful situation likely to manifest itself in the muscles.

Nothing about relaxation training is magically curative. The effectiveness of any relaxation training method is related to how well the person involved can take instruction and *wants* to relax. The techniques presented in this series of programs are derived from hypnosis and behavioral relaxation procedures. *Relaaax...* has some advantages over both of them — you can do it in the privacy of your own home, in comfortable surroundings (or even in your office), and it doesn't cost \$50 an hour.

Relaxation Theory and Practice

The actual techniques and text were derived from methods developed by psychologists Thomas C. Simek and Richard M. O'Brien, and presented in their book, *Total Golf* (Doubleday and Co.). They describe a uniquely interesting approach to improving your golf game: coupling the process of swinging the club with behavioral and psychological techniques such as relaxation training.

The theory is rather simple. When we experience stress, the muscles begin to ache. Relaxation cannot take place unless you learn to relax the muscles. This can, of course, be accomplished with drugs, by physically manipulating the muscles through massage, or by applying heat to the strained area. Another way to relieve muscular tension is by cueing yourself to focus on the changes you feel when you deliberately tense up and relax. Knowing what the body's response is, you can train yourself to respond to these cues consciously. When using this relaxation program, you will tense specific parts of your body in sequence. Then sounds (heard through a speaker/amplifier connected to the cassette AUX jack) and pictures will cue you to relax these parts. By focusing on the different feelings produced in the tension cycle and in the relaxation cycle, and associating the relaxation response with the cues, you should be able to train yourself in a short time.

Beginning To Relax

Adequate preparation of yourself and of the immediate environment is important. It could mean the difference between success and failure. First, remove any of the contributing causes of eyestrain, such as bright lights. You should always practice the following precautions before any long computing session. They are extremely important to keep in mind when using this program:

- Make sure no glare is reflecting off your monitor. Sources can be either natural or artificial light — a nearby lamp, or sunlight from a window.
- Position yourself in front of the monitor so that you don't have to tilt your head, which causes strain on the neck muscles.
- Adjust the contrast and brightness on your screen so that white regions appear grayish.
- Seat yourself in a chair that is firm, yet comfortable, preferably one with arms. Place your feet firmly on the floor.
- Position yourself 2½ to 3 feet from your monitor.

You should be aware of three more precautions before you begin. First, if you wear hard contact lenses, please remove them. Second, if you have chronic back trouble or musculoskeletal disease, talk to your physician before using this program. Last, you should not use this program if you have damaged your muscles through injury such as a pull or a tear.

Relaxing...

The first thing you will see when you boot up the relaxation program is the initialization message. The screen will do nothing for a while, then display a menu. Pressing Clear exits the program. Choice "E" stands for "Entire Program." It is a tutorial to help you learn the instructions as you go along. The goal is to teach you well enough so you don't have to read them every time you use the program. Four or five sessions are sufficient for most people. To the right of the text is a human figure. When the text explains which part of your body to focus on, the figure's corresponding muscle group is indicated by an arrow (TRS-80 Model I) or graphic hand (TRS-80 Model III). The program organizes the muscles into four groups:

- Hands, Biceps and Triceps
- Forehead, Nasal Area and Mouth
- Neck, Shoulders and Stomach
- Thighs, Calves and Feet

RELAAAX

A letter appears near the figure to remind you which particular muscle you are working on. All of this gradually weans you away from the text by cueing you.

Auditory cues reinforce these visual cues. Distinctly different pitches represent each of the main muscle groups. Then one, two or three higher pitches tell you whether you should work on the first, second or third muscle in the group. For instance, the tone for relaxing the hands is approximately middle C, followed by a single tone of higher pitch, which tells you to work on the first group, first muscle. After using the program a few times, you will be able to sit in front of the computer with your eyes closed and cue yourself only by the tones.

The "R" option, "Review Sequence," presents the visual and auditory cues, but with highly abbreviated text. With both the "R" and "E" options the only contact you need to have with the computer is to press a key to flip the text or drive the program. When the screen says "Tense", contract the muscle before you hit a key.

AAAUUUMMM...

The "D" menu option is a program called the "Deep Breathing Trainer." Use it to develop a deep and rhythmic breathing pattern. Simply sit near the keyboard. Strike a key as you begin to inhale, and another as you start to exhale. Press Clear to go back to the menu. Feedback on the screen is in the form of a graph. By watching the line peak and dip you can develop a deep and even breathing pattern. Try it!

Self-Suggestion

Self-suggestion is an important part of these programs. When using the relaxation training program you will notice a timing bar at the bottom of the screen. During the relaxation phase of the exercises you should concentrate your attention on the bar. As the bar gradually disappears, repeat positive statements to yourself. Let your body become more and more relaxed as the bar gets smaller and smaller. With each decrease in size let yourself feel looser and limper. You may need some practice, but you will find self-suggestion an essential part of using the relaxation program.

Peter J. Favaro is a school psychologist and will receive his doctorate in School and Clinical Psychology from Hofstra University in August. He also teaches psychology at Hofstra and is an educational and recreational video game design consultant.

Richard M. O'Brien, Ph.D. is a clinical psychologist and professor of psychology at Hofstra University. He has worked extensively in the areas of industrial and sports psychology and is the author of *Total Golf* (Doubleday and Co.) as well as *Industrial Behavior Modification: A Learning Based Approach to Business Management* (Doubleday and Co.).

Variables

AS: Messages to be printed in large letters.

AR\$: Contains a picture of a graphic hand on the Model III, and a right arrow on the Model I.

CH: ASCII value of the character being printed.

CO\$: Character at the end of a string read from data.

CS: Number of spaces to be placed between graphic letters.

D: Value read from data.

DX, DY: Changes in the x and y positions of the graphic pixel used in the Deep Breathing module.

EC: Equals 4, the number of graphic letters stored in data out of ASCII sequence.

EF: Equals 0 unless the ENTER key is held down when the program is first run, telling the program to display the graphic character set as it is defined.

FC: Equals 63, the ASCII value of the first graphic character stored in data.

HP: PRINT@ position for cursor home.

J, J1, J2, J3: Misc. loops.

LC: Equals 90, the ASCII value of the last graphic character stored in data in ASCII sequence.

LS: Number of characters between lines of graphic text.

LT\$(*): Array containing the graphic characters used to print a message on the screen.

LY: Last non-zero value on DY.

M3: Equals -1 if the program is running on a Model III.

MA\$: Graphic string containing a picture of a man.

MP: PRINT@ position where MA\$ is displayed.

NS: Number of different sounds defined.

P: PRINT@ position for next graphic character.

PA: PRINT@ position for AR\$.

PL: PRINT@ position for the one or two characters displayed to the left of the graphic man.

PS: Temporary storage of variable P.

Q: Position within array LT\$(*) of the letter being read from data.

S(*): Values of each sound.

SD: Sound duration.

SH: Number of lines of graphic text screen.

SN: Number of times to play a given note.

SO: Note to be played.

ST: Sound tone.

W: Width of graphic text screen.

X, Y: SET(x,y) position of graphic pixel in Deep Breathing module.

Z: Used to determine how much memory is available to be cleared as string space.

ZA: Equals 1.155 on a Model III, or 1 on a Model I. This value is used to adjust sounds and delay loops so their durations are the same on the Model III as they are on the Model I.

RELAAX RELAAX RELAAX RELAAX

RELAAAX

```

SS SS SS SS SS SS SS SS SS SS SS
SS
SS      TRS-80 BASIC      SS
SS      'Relax'           SS
SS  Authors: Peter J. Favaro  SS
SS  Richard M. O'Brien, Ph.D. SS
SS  Translator: Rich Bouchard SS
SS      Copyright © 1983    SS
SS  SoftSide Publications, Inc SS
SS                               SS
SS SS SS SS SS SS SS SS SS SS SS

```



If you don't wish to type this program, it is available on issue #43 SoftSide DV and CV.

Jump to the routine that reads in the machine language programs stored in lines 100-200.

```

10 CLS:PRINT"INITIALIZING, ONE MOMENT PLEASE.":GOTO60000
100 DATA 24,50,235,33,0,60,62,32,229,67,119,35,16,252
110 DATA 225,1,64,0,9,21,32,242,225,201,33,8,60,6,15
120 DATA 197,229,1,56,0,229,209,29,237,176,62,32,18,225
130 DATA 1,64,0,9,193,16,235,225,201,126,245,35,126,254
140 DATA 44,194,151,25,35,205,55,35,241,229,245,205,127
150 DATA 10,241,214,49,40,24,61,40,9,61,40,176,61,40,195
160 DATA 195,151,25,229,209,205,44,27,11,237,67,255,64
170 DATA 225,201,229,38,0,41,41,235,225,108,38,0
180 DATA 41,41,229,193,62,1,211,255,213,225,43,124,181
190 DATA 32,251,62,0,211,255,213,225,43,124,181,32,251
200 DATA 11,120,177,32,229,225,201

```

Subroutine to print the string contained in A\$ on the screen using large, graphic characters.

```

300 FORJ=1TOLEN(A$)
310 CH=ASC(MID$(A$,J,1)):IFCH>=63THEN350ELSEIFCH=46THENCH=LC+1EL
SEIFCH=39THENCH=LC+2ELSEIFCH=44THENCH=LC+3ELSEIFCH=38THENCH=LC+4
320 IFCH=42THENP=P+1:GOTO370
330 IFCH=32ORCH=37THENP=P+3:GOTO370
340 IFCH<63THENCH=88
350 PRINT@P,LT$(CH-FC);
360 IFLEN(LT$(CH-FC))=7THENP=P+2:GOTO370
370 NEXTJ
380 P=INT(P/64)*64+LS+HP-INT(HP/64)*64
390 RETURN

```

Start of main program. Clear string space, define most variables as integers, dimension some commonly used variables, and define some permanent variables.

```

500 CLEAR50:Z=MEM-500:IFZ>32767THENZ=32767
510 CLEARZ:DEFINTA-Y:DIMCH,J,P,A$
520 M3=(PEEK(293)=73)
530 IFM3THENZA=1.155:POKE16912,PEEK(16912)OR8:POKE16420,1:AR$=CH
R$(244)+CHR$(245)+CHR$(246)ELSEZA=1:AR$=" "+CHR$(93)
540 GOSUB10000

```


Menu routine. Display graphic menu and accept user selection.

```
600 CLS
610 NAME2,7000:GOSUB2100
620 GOSUB2000
630 IFA$="E"THENGOSUB1000:GOTO600
640 IFA$="R"THENGOSUB1100:GOTO600
650 IFA$="D"THENGOSUB1200:GOTO600
660 IFA$=CHR$(31)THEN32767
670 GOTO620
```

Entire Program option.

```
1000 NAME2,5000:GOSUB2100
1010 RETURN
```

Review Sequence option.

```
1100 NAME2,6000:GOSUB2100
1110 RETURN
```

Deep Breathing option.

```
1200 DX=0:DY=0:LY=-1
```

Print graphic border and the letters "E" and "I."

```
1210 CLS:PRINT@192,LT$(69-FC);:PRINT@640,LT$(73-FC);:PRINT@966,STRING$(57,131);
1220 X=13:Y=23
1230 FORJ=0TO45:SET(12,J):SET(13,J):NEXTJ
```

If line is moving off the top or bottom of the screen, make it start moving horizontally.

```
1240 IFY+DY<0ORY+DY>44THENDY=0
```

If line moves off the right of the screen, scroll the screen left one character (two pixels).

```
1250 IFX+DX>126THENAME4,0:X=X-2
```

Increment line position and draw the next point on the line.

```
1260 X=X+DX:Y=Y+DY:SET(X,Y)
```

Delay, then change direction if a key is struck. If CLEAR is hit return to the menu, otherwise continue drawing the line.

```
1270 FORJ=1TO25#ZA:NEXTJ
1280 A$=INKEY$
1290 IFA$=CHR$(31)THENRETURNELSEIFA$<>"THENDY=-LY:LY=DY:DX=1
1300 GOTO1240
```

Subroutine to input a single character from the user and put it in A\$, converting lower case characters into upper case.

```
2000 A$=INKEY$
2010 A$=INKEY$:IFA$=""THEN2010
2020 IFA$>=CHR$(97)AND A$<=CHR$(122)THENA$=CHR$(ASC(A$)-32)
2030 RETURN
```


RELAAAX

Subroutine to read in a block of data from memory, and display it on the screen.

Give some variables their initial values and clear the screen.

```
2100 MP=0:W=64:LS=128:HP=0:PA=0:SH=16:CS=1:P=0
2110 GOSUB2800
```

Read a string. If it's "***END**" then return from the subroutine.

```
2120 READA$
2130 IFA$="*END*"THENRETURN
```

If the first character of the string is an exclamation mark, then the string contains a special command. Determine which command it is and branch to the proper routine.

```
2140 IFLEFT$(A$,1)="!"THENJ=ASC(MID$(A$,2))-64:DNJGOSUB2300,2310,
2320,2330,2340,2710,2600,2370,2420,2430,2450,2460,2470,2480,270
0,2490:GOTO2120
```

Store the rightmost character of the string. If it is a special command character, remove it from the string.

```
2150 CD$=RIGHT$(A$,1):IFCD$="@"ORCD$="#"ORCD$="/"THENA$=LEFT$(A$,
LEN(A$)-1)
```

Graphically display the text string on the screen.

```
2160 IFA$("<")"THENGOSUB300
```

Perform the action specified by the terminal string character, if any.

```
2170 IFCD$="@"THENFORJ=1TO2000#ZA:NEXTJ:GOTO2110
2180 IFCD$="#"THENGOSUB2000:GOTO2110
2190 IFCD$="/"THENGOSUB2000:GOTO2120
2200 GOTO2120
```

Special command handlers.

Commands A-D: Adjust position of man, screen width, line spacing, and cursor home position, respectively.

```
2300 MP=VAL(MID$(A$,3)):PRINT@MP,MA$;:RETURN
2310 W=VAL(MID$(A$,3)):RETURN
2320 LS=VAL(MID$(A$,3)):RETURN
2330 HP=VAL(MID$(A$,3)):P=HP:RETURN
```

Command E: Play a tone a given number of times.

```
2340 SN=VAL(MID$(A$,3,1)):SO=VAL(MID$(A$,5))
2350 FORJ=1TOSN:NAME1,S(SO):IFJ("<")SNTHENFORJ1=1TO85#ZA:NEXTJ1
2360 NEXTJ:RETURN
```

Command H: Draw an arrow pointing to a part of the man, and display a one or two character abbreviation for the body part.

```
2370 PS=P:IFPA(">")THENPRINT@PA," ";:PRINT@PL,STRING$(7,32);:PRI
NT@PL+64,STRING$(7,32);
2380 IFLEN(A$)=2THENRETURN
2390 PA=(ASC(MID$(A$,3,1))-48)*64+MP-4:PRINT@PA,AR$;
```



```
2400 IF MID$(A$,4,1)<>". THEN PL=VAL(MID$(A$,4,1))*128-54+MP-4*LEN  
(A$) ELSE PL=MP+641
```

```
2410 P=PL:A$=MID$(A$,5):GOSUB300:P=PS:RETURN
```

Commands I-N: Adjust screen height, print a message centered over the man, print "TENSE," print "REPEAT," adjust character spacing, and move cursor, respectively.

```
2420 SH=VAL(MID$(A$,3)):RETURN
```

```
2430 A$=MID$(A$,3)
```

```
2440 P=MP-123-LEN(A$)*2-(LEN(A$)>5):PRINT@INT(MP/64)*64-128,CHR$(  
30);CHR$(26);CHR$(30);:GOSUB300:RETURN
```

```
2450 A$="TENSE":GOSUB2440:GOSUB2000:RETURN
```

```
2460 A$="REPEAT":GOSUB2440:GOSUB2000:RETURN
```

```
2470 CS=VAL(MID$(A$,3)):RETURN
```

```
2480 P=P+VAL(MID$(A$,3)):RETURN
```

Command P: Draw the timer bar at the bottom of the screen.

```
2490 PRINT@960,STRING$(63,191);:IFSH=16THENSH=15
```

```
2500 RETURN
```

Command G: Print a commonly used page of text and wait for a keystroke.

```
2600 GOSUB2800
```

```
2610 A$="REPEAT THE":GOSUB300
```

```
2620 A$="TENSION":GOSUB300
```

```
2630 A$="RELAXATION":GOSUB300
```

```
2640 A$="CYCLE. TENSE":GOSUB300
```

```
2650 A$="FIVE SECONDS.":GOSUB300:GOSUB2000
```

```
2660 RETURN
```

Command O: Perform as command F, but print the word "RELAX" centered on the screen.

```
2700 GOSUB2800:P=211:A$="RELAX":GOSUB300:GOTO2730
```

Command F: Print the word "RELAX" centered over the graphic figure, and delay while reducing the size of the timer bar.

```
2710 GOSUB2800
```

```
2720 A$="RELAX":GOSUB2440
```

```
2730 FORJ=1TO400*ZA
```

```
2740 IFJ=INT(120*ZA)THENPRINT@960,STRING$(63,188);ELSEIFJ=INT(24  
0*ZA)THENPRINT@960,STRING$(63,140);ELSEIFJ=INT(360*ZA)THENPRINT@  
960,CHR$(30);
```

```
2750 NEXTJ:GOSUB2800:PRINT@960,STRING$(63,191);:RETURN
```

Subroutine to clear the screen.

```
2800 NAME3,SH*256+W:P=HP:RETURN
```

Data for the full relaxation trainer.

```
5000 DATA !C128,!A24,!N768,FULL RELAXATION,ZZZZPROGRAM#
```

```
5010 DATA !C192,!N128,THIS PROGRAM IS,DESIGNED TO HELP,YOU LEARN  
TO,RELAX.#
```

```
5020 DATA !N128,PLEASE READ THE,DOCUMENTATION,BEFORE USING,THIS  
PROGRAM.#
```


RELAAAX

5030 DATA !N266,"LET'S BEGIN#"
5040 DATA !E1/9,!A180,!P,!D128,!B48,!M0,FIRST LET US,BECOME FAMI
LIAR,WITH THE SCREEN.#
5050 DATA ON THE RIGHT,SIDE OF THE,SCREEN THERE,IS A FIGURE.#
5060 DATA TEXT WILL APPEAR,TO THE LEFT,OF THE FIGURE.#
5070 DATA AT THE BOTTOM,OF THE SCREEN,THERE IS A,WHITE TIMER BAR
.##
5080 DATA THE FIRST FEW,TIMES THAT YOU,USE THIS PROGRAM,YOU WILL
NEED TO#
5090 DATA !N-128,PAY CLOSE,ATTENTION TO,THE TEXT.,AFTER A WHILE,
YOU WILL LEARN#
5100 DATA !N-128,THE RELAXATION,INSTRUCTIONS,AND YOU WILL,ONLY N
EED TO,LOOK AT THE#
5110 DATA FIGURE AND,LISTEN TO THE,AUDITORY CUES TO,DO THE EXERC
ISES.#
5120 DATA TO PREPARE TRY,TO IMAGINE A,TRANQUIL SCENE.#
5130 DATA CONCENTRATE,ON THIS,SCENE AND#
5140 DATA ON YOUR,BREATHING SO,IT IS DEEP,AND RHYTHMIC.#
5150 DATA CLOSE YOUR EYES,AND THEN,OPEN THEM AGAIN,AT THE TONE.#
,!D
5160 DATA !E1/9,THE FIRST,MUSCLE GROUP,YOU WILL RELAX,IS THE#
5170 DATA "HANDS, BICEPS,"AND TRICEPS,GROUP.#
5180 DATA !D64,THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX THI
S,MUSCLE GROUP.#,!E1/8
5190 DATA !H5.H,BEGIN WITH THE,HANDS. THIS,TONE SIGNALS,YOU TO F
OCUS,ON YOUR HANDS.#,!E1/8,!E1/7
5200 DATA TENSE THE HANDS,AND WRISTS BY,SQUEEZING YOUR,HANDS HAR
D.#
5210 DATA FEEL THE,TENSION IN YOUR,"FINGERS, WRISTS,"AND THE BA
CKS,OF YOUR HANDS.#



5220 DATA FEEL THE TENSION, FOR ABOUT, FIVE SECONDS., RELEASE THE, TENSION SLOWLY. #

5230 DATA ENJOY FEELING, RELAXED. AS THE, BAR GETS, "SMALLER, LET", YOURSELF #

5240 DATA !N64, BECOME MORE, AND MORE, RELAXED. #, !0, !6, !E1/8, !E1/7, !0

5250 DATA !H3.B, !N64, NOW YOU WILL, LEARN HOW TO, RELAX THE BICEPS. #

5260 DATA THIS TONE WILL, SIGNAL YOU TO, RELAX THE, BICEPS. #, !E1/8, !E2/7

5270 DATA THIS IS DONE BY, SQUEEZING THE, BICEPS THE WAY, YOU DO WHEN, SOMEONE #

5280 DATA SAYS..., &MAKE A MUSCLE.&, DO NOT MAKE, A FIST WITH, YOUR HANDS. #

5290 DATA BE SURE TO, REMEMBER TO, DO THIS WITH, BOTH ARMS. #

5300 DATA NOW LET THE, BICEPS RELAX., PUSH A KEY, AND FOCUS ON, THE BAR... #

5310 DATA !0, !6, !E1/8, !E2/7, !0

5320 DATA !H3.TF, NOW YOU WILL, RELAX THE, TRICEPS AND TOPS, OF THE FOREARMS. #

5330 DATA THIS TONE WILL, SIGNAL YOU TO, RELAX THE, TRICEPS AND, UPPER FOREARMS. #, !E1/8, !E3/7

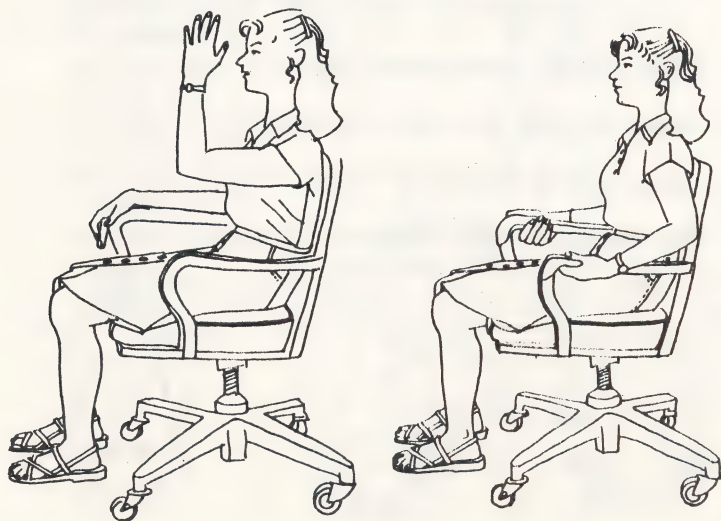
5340 DATA TO FEEL WHAT IT, IS LIKE TO TENSE, "THESE MUSCLES, ", PRESS YOUR, FOREARMS #

5350 DATA DOWNWARD INTO, THE ARMS OF A, CHAIR. FEEL THE, TENSION FOR, FIVE SECONDS. #

5360 DATA !N64, NOW RELAX..., LET YOURSELF, RELAX EVEN #

5370 DATA MORE AS THE BAR, GETS SMALLER, AND SMALLER., PLEASE PRESS, ANY KEY. #

5380 DATA !0, !6, !E1/8, !E3/7, !0



RELAAAX

RELAAAX



5390 DATA !H,NOW YOU WILL,LEARN HOW TO,RELAX THE,"FOREHEAD, NOSE
",AND MOUTH.#

5400 DATA THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX THIS,MUS
CLE GROUP.#,!E1/5

5410 DATA !H0.F,THIS TONE WILL,SIGNAL YOU TO,RELAX THE,FOREHEAD.
#,!E1/5,!E1/6

5420 DATA TENSE THE,FOREHEAD BY,FROWNING HARD.,HOLD THE FROWN,FI
VE SECONDS.#

5430 DATA RELAX THE FROWN,AND ENJOY THE,PLEASANT,SENSATION.#

5440 DATA !0,!G,!E1/5,!E1/6,!0

5450 DATA !H1.N,THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX TH
E NOSE.#,!E1/5,!E2/6

5460 DATA FIRST TENSE,THE MIDDLE OF,YOUR FACE BY,SCRUNCHING UP,T
HE NASAL AREA.#

5470 DATA TRY TO KEEP THE,FOREHEAD SMOOTH.,TENSE THIS AREA,FOR A
BOUT,FIVE SECONDS...#

5480 DATA NOW BEGIN,TO RELAX,THIS AREA OF,YOUR FACE...#

5490 DATA !0,!G,!E1/5,!E2/6,!0

5500 DATA !H1.M,THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX TH
E,MOUTH AREA.#,!E1/5,!E3/6

5510 DATA TENSE THE MOUTH,BY PRESSING THE,LIPS TOGETHER,HARD...#

5520 DATA HOLD THE TENSION,FOR ABOUT FIVE,"SECONDS, THEN",LET YO
URSELF...#

5530 DATA !0,!G,!E1/5,!E3/6,!0

5540 DATA !H,NOW YOU WILL,LEARN HOW TO,RELAX THE,"NECK, SHOULDER
S",AND STOMACH.#

5550 DATA THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX THIS,MUS
CLE GROUP.#,!E1/1

5560 DATA !H1.N,THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX TH
E,NECK MUSCLES.#,!E1/1,!E1/2

5570 DATA TENSE THE,NECK BY,PLACING A HAND,AGAINST YOUR,FOREHEAD
AND#

5580 DATA PRESSING YOUR,HEAD INTO YOUR,HAND. DO THIS,FOR FIVE,"S
ECONDS, THEN...#"

5590 DATA !0,!G,!E1/1,!E1/2,!0

5600 DATA !H2.SH,THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX T
HE,SHOULDERS.#,!E1/1,!E2/2

5610 DATA TENSE THE,SHOULDERS BY,PUSHING THEM,INTO YOUR CHAIR.#



5620 DATA HOLD THE TENSION, FOR ABOUT FIVE, "SECONDS, THEN", LET YOURSELF...#;!0

5630 DATA !H4.ST, THIS TONE WILL, SIGNAL YOU TO, PREPARE TO, RELAX THE STOMACH.#;!E1/1,!E3/2

5640 DATA TENSE THE STOMACH BY, SUCKING IT, IN HARD.#

5650 DATA HOLD THE TENSION, FOR ABOUT FIVE, "SECONDS, THEN", LET YOURSELF...#

5660 DATA !0,!6,!E1/1,!E3/2,!0

5670 DATA !H,NOW YOU WILL, LEARN HOW TO, RELAX THE, "THIGHS, CALVES", AND FEET.#

5680 DATA THIS TONE WILL, SIGNAL YOU TO, PREPARE TO, RELAX THIS, MUSCLE GROUP.#;!E1/3

5690 DATA !H6.T, THIS TONE WILL, SIGNAL YOU TO, PREPARE TO, RELAX THE, THIGH MUSCLES.#;!E1/3,!E1/4

5700 DATA TENSE THE, THIGHS BY, STRETCHING, YOUR LEGS OUT, IN FRONT OF#

5710 DATA YOUR BODY AS, FAR AS YOU CAN., DO THIS FOR, FIVE SECONDS., THEN...#

5720 DATA !0,!6,!E1/3,!E1/4,!0



RELAAAX

RELAAAX



5730 DATA !H8.C,THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX THE,CALF MUSCLES.#,!E1/3,!E2/4

5740 DATA TENSE THE,CALVES BY,RESTING YOUR,HEELS ON THE,FLOOR WITH#

5750 DATA YOUR LEGS OUT,IN FRONT OF,YOU. NOW DRAW,YOUR FEET,UP TOWARD#

5760 DATA YOUR FACE...,FEEL THE TENSION,AND THEN LET,THESE MUSCLES...#

5770 DATA !D,!G,!E1/3,!E2/4,!D

5780 DATA !H9.F,THIS TONE WILL,SIGNAL YOU TO,PREPARE TO,RELAX THE,FOOT MUSCLES.#,!E1/3,!E3/4

5790 DATA TENSE THE,FEET BY,CURLING YOUR,TOES INWARD,AND SQUEEZING#

5800 DATA THEM HARD. TENSE,THE FEET THIS,WAY FOR ABOUT,FIVE SECONDS.,THEN...#

5810 DATA !D,!G,!E1/3,!E3/4,!D

5820 DATA !H,9,END#

Data for the review sequence.

6000 DATA !I5,!A343,REVIEW SEQUENCE#,!D4

6010 DATA !P,"HANDS, BICEPS, ",XAND TRICEPS.,!E1/8,#

6020 DATA !JHANDS,!H52H,!E1/8,!E1/7,#,!K,!F

6030 DATA !L,!E1/8,!E1/7,!K,!F

6040 DATA !JBICEPS,!H32B,/,!E1/8,!E2/7,#,!K,!F

6050 DATA !L,!E1/8,!E2/7,!K,!F

6060 DATA !JTRICEPS,!H32T,/,!E1/8,!E3/7

6070 DATA #,!K,!F

6080 DATA !L,!E1/8,!E3/7,!K,!F

6090 DATA !H,"XZFOREHEAD,","NOSE, AND MOUTH",!E1/5,#

6100 DATA !JFOREHEAD,!H01F,!E1/5,!E1/6

6110 DATA #,!K,!F,!L,!E1/5,!E1/6,!K,!F

6120 DATA !JNOSE,!H11N,!E1/5,!E2/6

6130 DATA #,!K,!F,!L,!E1/5,!E2/6,!K,!F

6140 DATA !JMOUTH,!H11M,!E1/5,!E3/6

6150 DATA #,!K,!F,!L,!E1/5,!E3/6,!K,!F

6160 DATA !N-4,!H,"NECK, SHOULDERS, ",XAND STOMACH.,!E1/1,#

```

6170 DATA !JNECK,!H11N,!E1/1,!E1/2
6180 DATA #,!K,!F,!L,!E1/1,!E1/2,!K,!F
6190 DATA !JSHOULDERS,!H22SH,!E1/1,!E2/2
6200 DATA #,!K,!F,!L,!E1/1,!E2/2,!K,!F
6210 DATA !JSTOMACH,!H42ST,!E1/1,!E3/2
6220 DATA #,!K,!F,!L,!E1/1,!E3/2,!K,!F
6230 DATA !H,"THIGHS, CALVES," ,ZZZAND FEET.,!E1/3,#
6240 DATA !JTHIGHS,!H63T,!E1/3,!E1/4
6250 DATA #,!K,!F,!L,!E1/3,!E1/4,!K,!F
6260 DATA !JCALVES,!H83C,!E1/3,!E2/4
6270 DATA #,!K,!F,!L,!E1/3,!E2/4,!K,!F
6280 DATA !JFEET,!H93F,!E1/3,!E3/4
6290 DATA #,!K,!F,!L,!E1/3,!E3/4,!K,!F
6300 DATA !H,@,#END#

```

Data for the menu.

```

7000 DATA !D6,ZZ$RELAXATION,ZZZZ$TRAINER,!M0,!N64,RZZREVIEW SEQU
ENCE,EXXENTIRE PROGRAM,DXXDEEP BREATHING,ZZZTRAINER,!N65,!M1,$EN
TER CHOICE?,$END#

```

Subroutine to initialize graphics and sound variables.

Point to proper data. Check if ENTER is being depressed.

```

10000 NAME2,10000:EF=(PEEK(14400)AND1)

```

Read the data for the graphic figure.

```

10010 FORJ=1TO10:READJ1
10020 FORJ2=1TOJ1:READD:MA$=MA$+CHR$(D+128):NEXTJ2
10030 IFJ<>10THENMA$=MA$+CHR$(26)+STRING$(J1,24)
10040 IFEFTHENPRINT@192,MA$;
10050 NEXTJ
10060 DATA 6,0,0,0,40,63,61
10070 DATA 8,0,0,48,56,63,61,48,16
10080 DATA 9,32,62,47,63,63,63,63,47,52
10090 DATA 11,63,17,42,63,63,63,63,0,11,61,16
10100 DATA 11,2,47,52,63,63,63,21,0,0,10,11
10110 DATA 7,0,0,2,63,15,47,21
10120 DATA 7,0,0,42,63,0,42,63
10130 DATA 7,0,0,42,23,0,2,63
10140 DATA 8,0,0,58,5,0,0,47,16
10150 DATA 9,0,14,7,0,0,0,2,15,4

```

Read the data for the graphic character set.

```

10160 FC=63:LC=90:EC=4:DIMLT$(LC+EC-FC+1)
10170 FORJ=FCTOLC+EC:Q=J-FC
10180 READJ1
10190 FORJ2=1TO2
10200 FORJ3=1TOJ1
10210 READD:LT$(Q)=LT$(Q)+CHR$(D+128)
10220 NEXTJ3
10230 IFJ2=1THENLT$(Q)=LT$(Q)+CHR$(26)+STRING$(J1,24)

```

RELAAAX

RELAAAX

```

10240 NEXTJ2: IFEFTHENPRINT@INT(Q/10)*192+(Q-INT(Q/10)*10)*5+142,
LT*(Q);
10250 NEXTJ
10260 DATA 2,6,25,0,4
10270 DATA 1,0,0
10280 DATA 3,54,51,20,5,0,5
10290 DATA 3,55,51,4,13,12,1
10300 DATA 3,22,3,1,9,12,4
10310 DATA 3,23,3,20,13,12,1
10320 DATA 3,55,19,1,13,12,4
10330 DATA 3,55,19,1,5,0,0
10340 DATA 3,22,35,17,9,12,1
10350 DATA 3,53,48,21,5,0,5
10360 DATA 2,43,1,14,4
10370 DATA 3,0,43,1,9,6,0
10380 DATA 3,53,48,5,5,0,5
10390 DATA 3,21,0,0,13,12,4
10400 DATA 3,29,24,21,5,0,5
10410 DATA 3,29,16,21,5,2,5
10420 DATA 3,22,3,20,9,12,1
10430 DATA 3,55,51,4,5,0,0
10440 DATA 3,22,3,20,9,6,4
10450 DATA 3,55,51,4,5,2,4
10460 DATA 3,38,51,0,8,12,1
10470 DATA 3,3,23,1,0,5,0
10480 DATA 3,21,0,21,9,12,1
10490 DATA 3,37,32,5,2,6,0
10500 DATA 3,21,16,21,7,2,5
10510 DATA 3,9,24,1,6,2,4
10520 DATA 3,9,24,1,0,5,0
10530 DATA 3,3,27,1,14,12,4
10540 DATA 2,0,0,12,0
10550 DATA 2,14,1,0,0
10560 DATA 2,0,0,14,1
10570 DATA 2,5,5,0,0

```



Read the sound data.

```

10580 NS=9:DIMS(9):FORJ=1TONS
10590 READST,SD
10600 S(J)=ST*ZA+SD*256+65536*(SD>127)
10610 NEXTJ
10620 DATA 77,19,38,38,53,27,26,55,57,25,14,100
10630 DATA 7,200,30,47,13,108
10640 RETURN

```

Program termination.

32767 END

Subroutine to place the machine language routines into high memory and to tie them into the NAME command.

```
60000 Y=111:X=255:POKE-1,0:IFPEEK(-1)<>0THENX=191:POKE-16385,0:IFPEEK(-16385)<>0THENX=127
60010 POKE16562,X:POKE16561,Y:CLEAR50:A1=PEEK(16561)+2:A2=PEEK(16562):A=A1+A2*256:Z=A-1:FORX=1TO143:Z=Z+1:Z=Z+65536*(Z>32767)
60020 READY:Z1=Z1+Y:POKEZ,Y:NEXTX
60030 IFZ1<>16632THENCLS:PRINT"DATA ERROR. PLEASE CHECK THESE LINES:":PRINT:LIST100-200
60040 IFPEEK(16396)<>201THENCMD"T":POKE14308,0
60050 POKE16782,195:POKE16783,A1:POKE16784,A2
60060 GOTO500
```

SWAT

For TRS-80® RELAAAX...

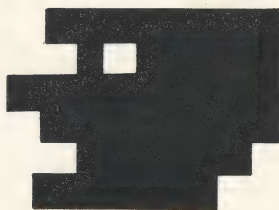
TABLE



LINES	SWAT CODE	LENGTH	LINES	SWAT CODE	LENGTH
10 - 180	YV	513	5480 - 5560	CL	570
190 - 390	BZ	370	5570 - 5640	EE	525
500 - 660	BA	299	5650 - 5720	SF	501
670 - 1260	YI	256	5730 - 5800	HP	541
1270 - 2130	YM	239	5810 - 6090	KB	393
2140 - 2340	XQ	420	6100 - 6210	HL	431
2350 - 2460	KA	436	6220 - 10010	FN	489
2470 - 2700	JA	268	10020 - 10130	RZ	342
2710 - 5050	CC	557	10140 - 10250	PF	288
5060 - 5140	BC	548	10260 - 10370	EO	254
5150 - 5220	VO	561	10380 - 10490	JS	269
5230 - 5300	YU	523	10500 - 10610	UA	233
5310 - 5390	ZC	560	10620 - 60060	HF	429
5400 - 5470	VJ	548			

DV BONUS

nine games



for Preschool Children

by George Blank

Nine games for Pre-school Children is a collection of short games designed for very young children. It runs on a TRS-80® Model I or III with 32K RAM.

Nine Games for Preschool Children is a collection of nine programs that exist in the computer's memory together, but execute one at time. They are tied together by a menu that displays symbols for each program. To go from the menu to one of the programs, the child simply enters the number beside the symbol for the program. The user may return to the menu from any program by pressing the CLEAR key. The one key that will disrupt the programs is BREAK, but my four-year-old, who did not know the alphabet, learned to type RUN after watching my six-year-old do it once. I kept a card with the word RUN on it near the computer to remind him, but he never looked at it.

An adult should assist until the child can do these operations:

- Press a number to go from the menu to the desired program. A child too young to recognize the numbers can do it by learning the location of the "1," and counting.
- Press CLEAR to switch programs.
- Learn not to press BREAK, or learn to type RUN and press ENTER.

I taught these three things to four-year-olds in fifteen minutes. My boys taught their friends in five. Children younger than four should have adult supervision at the computer. A nine-month-old girl who visited our home frequently loved to play REPEAT, so the games have potential for the very young.

LETTERFUN

The screen functions as a blackboard, accepting and displaying whatever letters the child presses. When he presses ENTER, the computer animates those characters by repeating them, moving them around on the screen, or even exploding and scattering them. This game increases letter recognition, pattern discrimination, and interest in words.

ABC

Introducing children to the alphabet's characters, and the concept of a fixed order is the object of this game. Its design moves the child from the point at which he must say to himself "ABCDEFGHJKLM..." before pressing "N," to the place where he knows immediately that "N" follows "M." If the child selects the next letter in sequence, the figure on the screen smiles. If the child is wrong, the man shakes his head.

LETTER WARS

Lower-case letters are harder than capitals for children to learn. This game gives them practice in associating the large lower-case letters on the screen with the capital letters on the keyboard. It is quite effective with a group — the children can talk about the letters, and teach each other the names and possibly even the sounds, while also acquiring skills of cooperation and growth. The space battle scores are based on the accuracy of the guesses, and provide motivation.

REPEAT

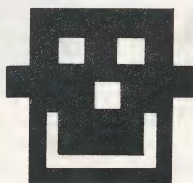
Again, the video display serves as a blackboard, but the computer prints each letter thirty-two times to fill up a screen row. All four arrow keys are enabled, so that the children can print rows of arrows on the screen (Model I only). *Repeat* develops the concept of pattern recognition, to prepare children for word recognition and art. My children, when they were young, loved to use the slash, greater than, and less than signs to make "tire tracks" across the screen.

NAMES

This is a good introduction to the computer for children old enough to recognize their own names in written form. An adult should enter up to six names (the child, family members, pets, friends) and the computer will select them at random and print them on the screen, pausing after each set of fifty names. Beginning readers find this is also good practice for learning new words. When playing on their own, children have fun entering names, patterns, or words, and delight in the random display. To practice with less than six names, hit ENTER after the last entry.

BLACKBOARD

This game simply uses the screen as a blackboard. The only special feature is that the arrows are active. An unshifted left arrow erases, but all other arrows, both with and without shift, print the arrows (Model I only). Note: On newer Model I's the shift-down arrow does not generate an arrow character.



DV BONUS

NINE GAMES FOR PRE-SCHOOL CHILDREN

NINE GAMES FOR PRE-SCHOOL CHILDREN

DV BONUS

**TROLL'S GOLD**

Using the arrow keys, the child runs through a maze in which doors open and close at random. The object is to go to the pile of gold in the lower right hand room, get the gold, return to the first room, and go up the stairs without being caught by the troll. The child presses the appropriate arrow when a door opens, and the computer pauses for an instruction. If he does not enter a direction, the computer waits briefly, and then continues. *Troll's Gold* teaches directions and eye-hand coordination.

MATH DRILL

This one teaches elementary addition and subtraction. The numbers to be added or subtracted are all single digits, and subtraction never results in a negative number. Designed for young children, it displays graphic blocks to aid in visualizing how these arithmetic processes work.

CALCULATOR

Think of this as a normal four-function calculator, except that the results appear in the form children will use in school. In division problems, the remainder, if any, is displayed. The following format must be used to enter problems (young children may need help with this):

(First Number)
(Operating Instruction)
(Second Number)
(ENTER or space bar)

The acceptable symbols for Operating Instructions are:

Add: + or ; or A
Subtract: - or S
Multiply: X or M or *
Divide: / or D

George Blank has a degree in education, with graduate study in child development and counseling, plus a wide variety of teaching experiences in industry, the military, public and private schools, and churches. In addition he is a father, computerist, and former Editor of *SoftSide*.

FALL CONSTELLATIONS

by Kirke Darbe



Fall Constellations requires a TRS-80® Model I or III with 16K.

We've got a show! I mean a SHOW — complete with animals, birds, music, royalty, damsels in distress, heroes — EVERYTHING. Best of all, it's free. When is it? Every night this fall — and you can see the annual light show spectacular, the Fall Constellations, revealed in the heavens above your home.

Fall Constellations introduces the beginning stargazer to some of the cosmic sights observable in the fall sky. More experienced stargazers will appreciate the help it offers in locating interesting phenomena.

Your first option is to see the instructions (a brief explanation of procedures and symbols), or to go straight to the menu listing the constellations available.

After you select a stellar object, the screen clears and stars appear. Dim ones are represented by an "X," moderately bright by "*", and a large hexagon represents the very bright. Background stars show up as dots. Other interesting objects, such as galaxies, nebulae, and clusters, show up as letters. The constellation's name, and any items of note about it or nearby space, appear at the bottom of the screen. Also at the bottom is the code for the stars. When you are through looking at a particular constellation, press any key to return to the menu. To stop viewing entirely, press "0" (zero) when asked to input a selection.

I selected the constellations strictly according to personal preference. They appear on screen without reference to direction, though north generally is at the top. Each evening, the stars appear to have moved across the sky even though viewed at the same time each evening. They also rise and set as the Earth rotates. Stargazers must use their imagination to fill in the flesh around the starry bones.

For those interested in further details, the sources used in writing this program were the September, 1982, issue of *Astronomy*, a seasonal star chart, and a computer generated star map. Any differences between them were resolved on personal preferences.

Variables

A: Data loop counter
C: Loop used when reading constellation names from data.
CN\$: Name of constellation read.
DT\$: Contains a number of spaces and periods for menu display.

N: Menu selection.
S\$: Graphic picture of a star.
V: Equals 15360, the start of video RAM.
X,Y,Y\$: Data variables.
Z\$: Input variable string.

FALL CONSTELLATIONS

```

SS SS SS SS SS SS SS SS SS SS
SS                                     SS
SS      TRS-80 BASIC                 SS
SS  'Fall Constellations'           SS
SS  Author: Kirk D. Darbe           SS
SS  Copyright © 1983                SS
SS  SoftSide Publications, Inc      SS
SS                                     SS
SS SS SS SS SS SS SS SS SS SS

```

**If you don't wish to type this program, it is
available on issue #43 SoftSide DV and CV.**

Clear string space and set constants.

```

100 CLEAR250
110 V=15360:S%=CHR$(166)+CHR$(166)+CHR$(132)
120 DT$=" . . . . . "

```

Print title block and present instruction option.

```

130 CLS:PRINT@268,CHR$(23);"FALL CONSTELLATIONS":PRINT@476,"BY":
PRINT@658,"KIRK D. DARBE":FORX=1TO500:NEXT:PRINT@964,"DO YOU NEE
D INSTRUCTIONS";:Z$="Y":INPUTZ$:IFLEFT$(Z$,1)="Y"ORLEFT$(Z$,1)=C
HR$(121)THEN60SUB380

```

Print the menu of available constellations.

```

140 CLS:PRINT"THE FOLLOWING CONSTELLATIONS ARE AVAILABLE FOR VIE
WING:":PRINT
150 PRINT"CONSTELLATION";TAB(42);"NUMBER":RESTORE
160 FORC=1TO10:READCN$:PRINTCN$:MID$(DT$,LEN(CN$)+1);C:NEXTC
170 DATA "CYGNUS THE SWAN","LYRA THE HARP","AQUILA THE EAGLE"
180 DATA "ANDROMEDA THE MAIDEN","PEGASUS THE WINGED HORSE"
190 DATA "CEPHUS THE KING","PERSEUS THE HERO"
200 DATA "CASSIOPEIA THE QUEEN","LITTLE DIPPER","URSA MAJOR"

```

Accept menu selection.

```

210 PRINT@896,CHR$(30);"PLEASE ENTER THE NUMBER OF THE CONSTELLA
TION YOU WANT";:N=-1:INPUTN:IFN<0ORN>10THEN210

```

Exit if a "0" is typed as the menu option.

```

220 IFN=0THEN350

```

Read through the constellation data until we reach the desired constellation.

```

230 IFN=1THEN280
240 FORA=1TON-1
250 READX,Y:IFX<>0THEN250
260 READX,Y$:IFY$<>"END"THEN260
270 NEXTA

```

Print the bottom of the screen display and background stars.

```

280 CLS:PRINT@768,STRING$(15,176);:PRINT@846,CHR$(191);STRING$(4
8,176);

```

```
290 PRINT@897,"NOTE: ";:PRINT@960,S$;"-BRIGHT *-MODERATE X-DIM  
.-BACKGROUND";
```

```
300 FORX=1TO20:POKEV+RND(767),46:NEXTX
```

Display constellation and pertinent information.

```
310 READX,Y:IFX<>0THENPOKEV+X,Y:GOTO310
```

```
320 READX,Y$:IFY$="END"THEN340ELSEIFY$="X"THENY$=S$
```

```
330 PRINT@X,Y$;:GOTO320
```

Wait for a keypress before returning to the menu.

```
340 Z$=INKEY$:IFZ$=""THEN340ELSE140
```

Display farewell message.

```
350 CLS:PRINT" THAT CONCLUDES THIS SHOW. FOR THESE AND OTHER G  
REAT SIGHTS,":PRINT"JUST STEP OUTSIDE ON ANY CLEAR, DARK NIGHT T  
HIS FALL. AFTER":PRINT"ALL, IT'S FREE!"
```

```
360 PRINT:PRINT" REMEMBER TO DEPOSIT YOUR TRASH IN THE CONTAIN  
RS AT THE EXITS."
```

```
370 GOTO660
```

Instructions subroutine.

```
380 CLS:PRINT" YOU WILL BE GIVEN A MENU OF CONSTELLATIONS TO  
CHOOSE FROM.":PRINT"AFTER YOUR MAKE YOUR SELECTION, THE SCREEN  
WILL CLEAR AND THE":PRINT"REQUESTED STAR FIELD WILL APPEAR USING  
THE FOLLOWING SYMBOLS:"
```

```
390 PRINT:PRINTTAB(9);S$;"-BRIGHT STARS";TAB(34);"* *-MODERATELY  
BRIGHT STARS":PRINT:PRINTTAB(10);"X -DIM STARS";TAB(34);". -BACK  
GROUND STARS"
```

```
400 PRINT:PRINT"OTHER OBJECTS OF INTEREST WILL BE SHOWN WITH THE  
SE SYMBOLS":PRINT:PRINTTAB(10);"G - GALAXIES N - NEBULA  
C - CLUSTERS":PRINT:PRINTTAB(26);"<HIT ENTER>"
```

```
410 Z$=INKEY$:IFZ$=""THEN410
```

```
420 CLS:PRINT" AT THE BOTTOM OF THE DISPLAY WILL BE THE NAME  
OF THE":PRINT"CONSTELLATION BEING VIEWED, ALONG WITH SOME BRIEF  
NOTES ON IT.":PRINT"WHEN YOU ARE DONE VIEWING, HIT ANY KEY TO RE  
TURN TO THE MENU."
```

```
430 PRINT:PRINT" TO EXIT THIS PROGRAM, TYPE ";CHR$(34);"0";CH  
R$(34);" WHEN ASKED TO MAKE YOUR":PRINT"CONSTELLATION SELECTION  
FROM THE MENU."
```

```
440 PRINT:PRINTTAB(26);"<HIT ENTER>"
```

```
450 Z$=INKEY$:IFZ$=""THEN450ELSERETURN
```

Data for constellations.

```
460 DATA 526,42,466,42,342,42,217,42,612,42,89,88,478,88,545,88,  
406,67,0,0
```

```
470 DATA 144,"DENEb",209,"X",836,"CYGNUS",904,"(ALSO CALLED THE  
NORTHERN CROSS)-THE STAR CLUSTER",0,"END"
```

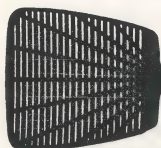
```
480 DATA 482,42,542,42,291,88,351,88,480,78,484,68,0,0
```

```
490 DATA 163,"VEGA",228,"X",836,"LYRA",904,"THE RING NEBULA AND  
A VISIBLE DOUBLE STAR (D)",0,"END"
```

— FALL CONSTELLATIONS —

FALL CONSTELLATIONS

500 DATA 211,42,89,88,337,88,468,88,410,88,529,88,548,88,159,67,0,0
 510 DATA 266,"ALTAIR ",273,"X",836,"AQUILA",904,"THE STAR CLUSTER",0,END
 520 DATA 414,71,555,42,439,42,596,42,607,42,614,42,404,88,472,88,544,88,550,88,574,88,753,88,0,0
 530 DATA 559,"GREAT SQUARE",834,"ANDROMEDA",904,"THE ANDROMEDA GALAXY AND GREAT SQUARE (PART OF PEGASUS)",0,"END"
 540 DATA 143,42,160,42,100,88,396,88,417,88,488,88,496,88,467,88,376,67,0,0
 550 DATA 272,"GREAT SQUARE",836,"PEGASUS",904,"THE GREAT SQUARE AND STAR CLUSTER",0,"END"
 560 DATA 549,42,94,88,343,88,358,88,603,88,0,0
 570 DATA 836,"CEPHUS",904,"THE STEEP-ROOFED HOUSE SHAPE",0,"END"
 580 DATA 38,67,39,67,223,42,420,42,98,88,161,88,215,88,280,88,286,88,355,88,410,88,538,88,0,0
 590 DATA 728,"X",731,"PLEIADES",836,"PERSEUS",904,"THE DOUBLE CLUSTER AND PLEIADES GROUP (PART OF TAURUS)",0,"END"
 600 DATA 161,88,350,88,418,42,544,42,614,42,484,67,0,0
 610 DATA 834,"CASSIOPEIA",904,"THE M OR W SHAPE AND THE STAR CLUSTER",0,"END"
 620 DATA 139,42,274,88,410,88,435,42,485,88,567,88,615,88,0,0
 630 DATA 72,"POLARIS",832,"LITTLE DIPPER",904,"(PART OF URSA MINOR) - POLARIS THE NORTH STAR",0,"END"
 640 DATA 26,42,198,42,203,42,259,42,154,43,218,43,109,88,169,88,179,88,209,88,233,88,275,88,280,78,302,88,340,88,371,88,389,71,410,88,484,88,535,88,0,0
 650 DATA 28,"POLARIS",139,"BIG DIPPER",834,"URSA MAJOR",904,"THE POINTER STARS (+ SIGNS), GALAXY AND NEBULA",0,"END"
 660 END



SWAT TABLE

For TRS-80® FALL CONSTELLATIONS

LINES	SWAT CODE	LENGTH
100 - 180	YD	522
190 - 300	BZ	434
310 - 380	VU	549
390 - 430	UD	603

LINES	SWAT CODE	LENGTH
440 - 510	TW	507
520 - 580	SS	562
590 - 640	QU	547
650 - 660	PV	120



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SoftSideTM ADVENTURE SERIES



Issue 43 Adventure: High School

Who said that going to high school is not an adventure? You must go to all your classes, and complete all the activities before earning credit. Satisfy your teachers' requirements, pass six subjects, and graduate. Don't get suspended too often, or you might get expelled!

SoftSide Adventure Series CV DV

What would you say to a program that asks, "What do you want to do?" Well, you might say, "GET RUBY" or KILL GIANT", because that's how the *SoftSide Adventure Series* works.

Each issue, the latest Adventure takes you to another world of fantasy, puzzles, and thrills. Your first task is often simple survival — and even that basic feat can be daunting until you figure out the *right* way to do it. You'll have to be ingenious and persevering, and your rewards will be great.

To "win" a fantasy/adventure game, you must solve the author's devious puzzles, and overcome the obstacles that confront you — whether they be dragons or desperadoes. Death, should it come, is transitory — just re-run the program to live again!

Experienced adventurers make detailed maps of each world as an aid to effecting a solution, but you can omit this exercise if your memory is exceptional. Express your wishes with one- or two-word commands like, "LOOK", "DROP KNIFE", or "GET RUBY". Use "I" to get an inventory of your possessions. The introduction to each Adventure explains this more fully.

To start up the Adventure, just run the program called "INTRO" or "INTRO.BAS" on your disk, or select the Adventure from the DV menu. On cassette, the INTRO program is the one just before the Adventure, which is the last program on the tape.

The Adventure runs on any TRS-80 with at least 16K RAM (32K disk).

Here are the encrypted hints for *Arabian Nights*, the Adventure in Issue 42.

To kill the dragon: DVZI ZMW IFY GSV IRMT.

To kill the serpent: DVZI ZMW IFY GSV ZNFOVG.

To kill the snake: FHV GSV HVIKVMG PROOVI.

To kill the Roc: FHV GSV HXRNRGZI.

To kill the cyclops: HSLLG SRN DRGS GSV WRZNLMW ZMW GSV HORMTHSLG.

To get past the vultures: WIRMP LNZI'H DZGVI.

To kill the red genie: LUUVI SRN Z TLYOVG UFOO LU VO SZYRY'H DZGVI.

To kill Roxor: IFY GSV NZTRX OZNK.

To get the eggshell: XFG GSV VTT DRGS GSV HXRNRGZI.

Open doors and gates by: SRGGRMT GSV TLMT.

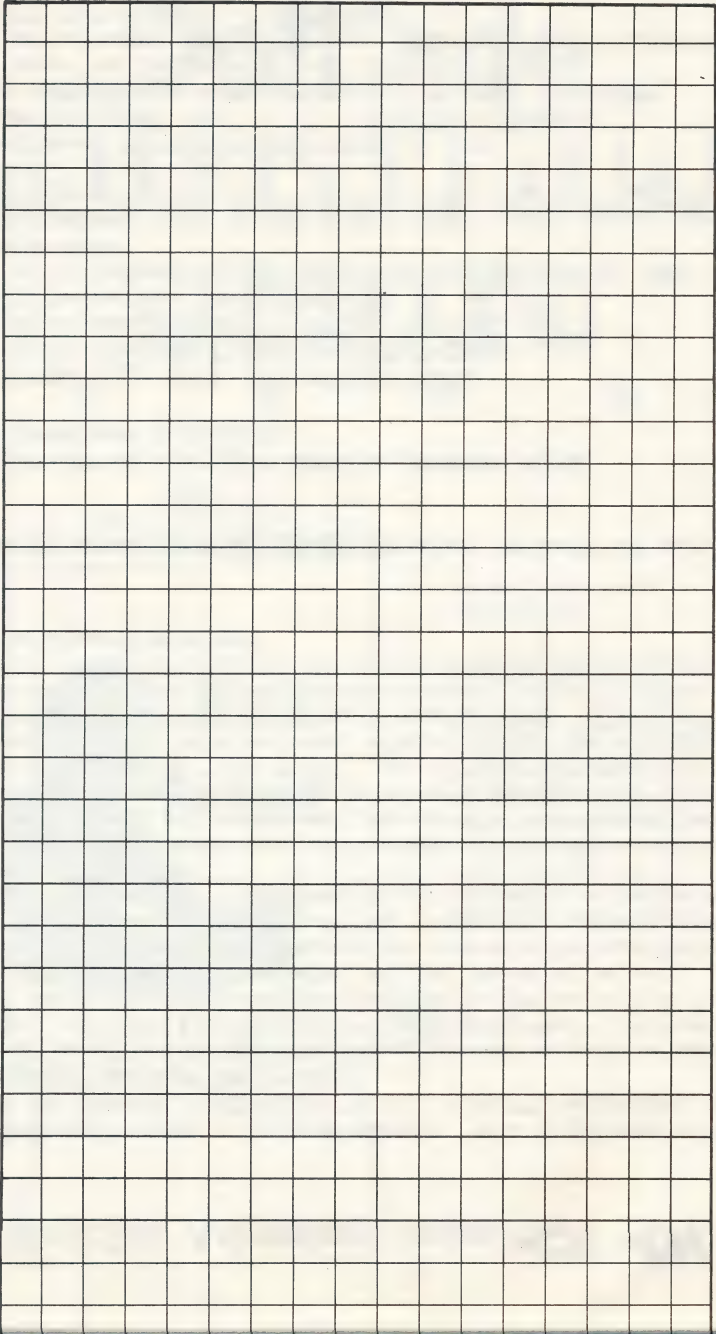
To escape from Roxor's secret room: SRG GSV TLMT.

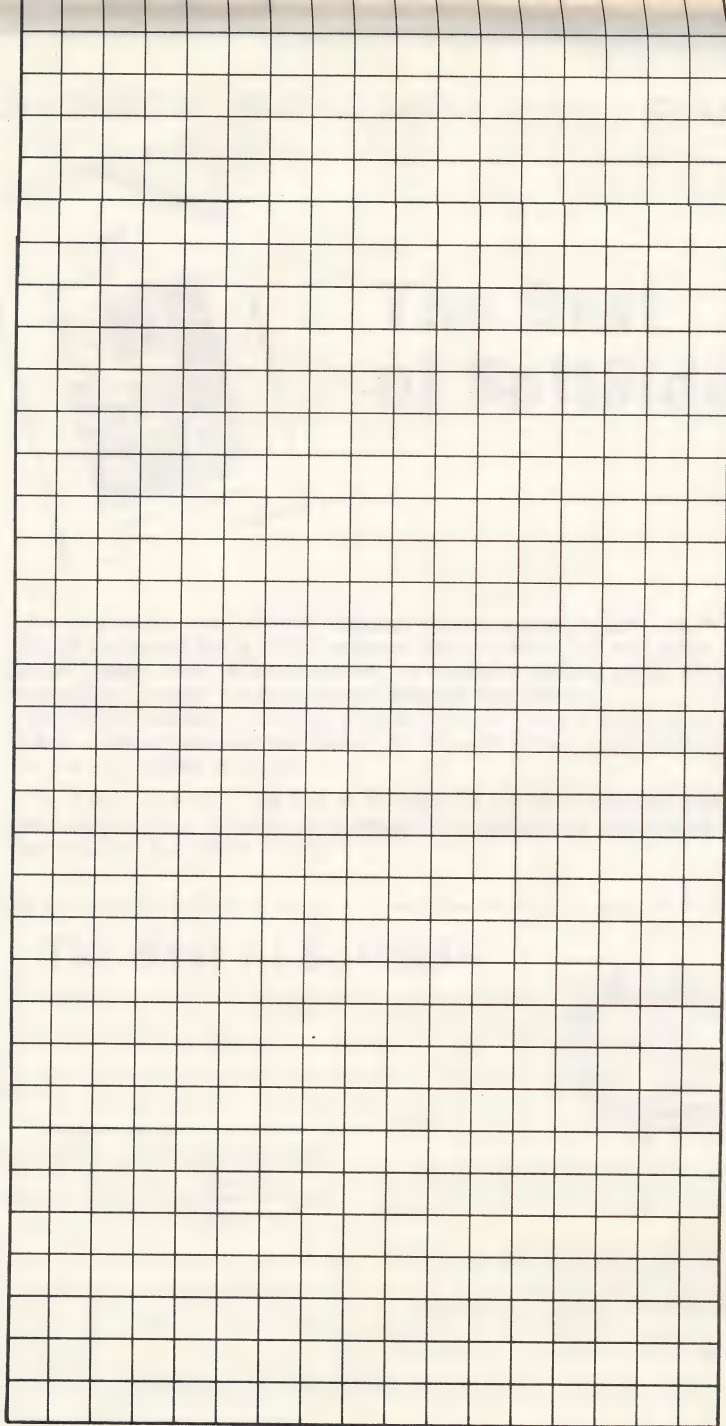
To get the magical cloak: TREV GSV TLYOVG GL GSV HSLKPVVKVI ZUGVI PROORMT GSV IVW TVMRV.

In sandy places: WRT ULI ZOO BLF'IV DLIGS.

To fly the magic carpet: HGZMW LM RG ZMW HZB ZDZB.

Map Your Adventure Here





Notes

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SWAT TABLE

At the conclusion of each program listing in **SoftSide Selections**, we include a **SWAT (Strategic Weapon Against Typos) Table**. **SWAT** for the TRS-80 appeared in **SoftSide** Issue #30. If you missed Issue #30, we'll send you a free reprint of **SWAT**. Send a self-addressed, stamped envelope to: **SoftSide Publications, Inc.**

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Please be sure to tell us that you have a TRS-80 computer.

Magnetic Media

Disks are available in Model I or Model III format. They contain the DOSPLUS operating system. A cover program runs automatically when you boot the disk. Back issues earlier than May 1981 are available only in Model I format. If you have a two-drive Model III, you can convert such disks with the CONVERT utility.

Tapes CLOAD in the normal manner on Model I's, and at low speed (500 baud) on Model III's. The first program is a cover/menu program; side two of the tape is a duplicate of side one.

SoftSide Selections disks and tapes are duplicated on reliable, professional equipment. Bad copies are exceedingly rare. Nevertheless, the trip through the mail occasionally results in damage to the sensitive magnetic media. If, after a reasonable number of attempts on well-adjusted, clean equipment, you are unable to load a program, return it to us along with an exact explanation of your problem. We will send you a replacement copy.

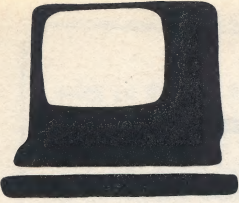
SoftSide Selections media are not copy protected. We urge you to make an archival backup copy of your disk or tape as soon as you receive it, as our replacement policy is valid only for 30 days. Please resist the urge to give away copies of copyrighted material.

Line Listings

The line listings in this booklet are in standard 64-column format, and they appear exactly as they should on your screen when you type LIST.

System Requirements

The necessary memory and other equipment you need to run a program are listed in the introductory paragraph of the article for each program. (Also see the **SoftSide Adventure Series** elsewhere in this booklet.)



SoftSideTM Selections

Here's **SoftSide Selections**, the handy, pull-out booklet with program listings for your TRS-80 Model I or III computer. This issue, **SoftSide Selections** for the TRS-80 features:

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Nine Games For Pre-school Children — Small children can use the computer, too, with these nine engaging activities. There's even an "arcade" game geared for the little ones.

- **The SoftSide Adventure Series — High School**,
by David Pleacher

You are in high school, and who said that going to high school is not an adventure? Go to all your classes, and complete all the activities before earning credit. Don't upset the assistant principal, or you might get suspended — or even expelled! Satisfy your teachers' requirements, pass six subjects and graduate.

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